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HEALTH EQUIPMENT NOTE

EQUIPPING A HOSPITAL BUILDING

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UNIVERSITY OF NORTH LONDON
WITHDRAWN

Contents

I Preface.
II Scope.
III The form of the Hospital Equipment Notes.
IV Calculation of the cost of equipment.
V The equipping of a hospital building.
IV Control of noise.
VII British Standards.

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I. Preface

This Equipment Note is the first of a series designed to help hospital authorities and those engaged with them in the task of equipping new hospital units. The series will deal with the relationship of equipment planning to overall project planning and will give guidance on the planning and performance of the various tasks involved.

Guidance is given in the various Hospital Building Notes on the planning of buildings and the standards of accommodation suitable for hospital departments. The Hospital Equipment Notes will run parallel to the Hospital Building Notes. They will provide, for individual departments, lists of equipment which good modern practice requires, and these will be related to what is said in the Building Notes. They will include cost recommendations. This information is intended to be of assistance at various stages of the building programme.

While the Equipment Notes are related essentially to new buildings, the advice in them should often be of value to those re-equipping existing buildings.

II. Scope

This Equipment Note introduces the series by describing its purpose and the form in which the Notes have been prepared and provides a general background to the departmental Equipment Notes which follow. Guidance is also given on how equipment schedules for individual building projects might be prepared.

III. The form of the Hospital Equipment Notes

(*a*) *Definition and classification of equipment*

Throughout these Equipment Notes, the term "equipment" covers all items necessary for the functioning of the services of the hospital and includes both non-technical (e.g. furniture) and technical equipment. Short-term consumable supplies such as fuel, stationery, food, drugs and dressings are not included.

In the schedules in the Equipment Notes equipment is classified in three groups:

Group I: Items usually supplied and fixed by the contractor for the works;

Group II: Items having a permanent or semi-permanent location and having a significant effect on space and/or structural requirements:

(*a*) those supplied by the hospital authority and fixed by the contractor for the works;

(*b*) those supplied by the hospital authority and put in position by them or on their instructions outside the general construction contract.

Group III: Smaller items, usually storage items, supplied and put in position by the hospital authority.

It is useful to maintain these classifications through all stages of planning.

(*b*) *General*

In preparing the Equipment Notes for the various hospital departments the Department have had regard to modern developments in equipment, but changes are constantly being made and new equipment evolved. The recommendations will therefore be amended from time to time.

In listing the requirements for each department, allowance has been made as far as possible for flexibility of planning and variation in size of department within the context of the Building Notes. This has been achieved in various ways, sometimes, for example, by showing alternative contents for departments of different size, sometimes by listing the requirements for one room only which will need to be multiplied by the number of such rooms included in a particular scheme. While it is recognised that the contents of the schedules will not automatically suit the requirements of every building project in every detail, the basic items should provide a check list suitable to the majority of schemes. In some circumstances there may be a case for alternative or additional items of equipment. Some of the more important variations which will most frequently be needed are shown in the list of additional items at the foot of the lists of basic items.

Fixed items of equipment have often been mentioned in the Building Notes, but it has been thought useful to mention them again in the Equipment Notes, as well as the movable contents of each room, as a convenience to those concerned with the planning of room spaces. Structural elements, floor coverings, non-specialised heating and lighting fittings and similar items which are basic to any building are not, however, included in the Equipment Notes; neither are venetian blinds, blackout blinds and window curtain tracks, since the requirements will vary with local circumstances and will have to be specially considered.

(*c*) *Storage Fittings*

The type of storage fitting to be provided for small items of equipment and consumable stores has not generally been shown in the Equipment Notes

PN 6064663 2

since this will be determined from the particular needs of the room and equipment to be stored.

The cubic areas for storage and the overall sizes of worktops suggested have been related to a provisional series of standard modular sizes. The overall dimensions of the cupboards are in multiples of the basic module. To give maximum flexibility, it is intended that the range of cupboards, when used in combination, will fit in length every 8-inch increment of space up to 6 feet 8 inches and every 4-inch increment above that length. Details of these cupboards will be published in due course.

One figure of 3 feet 0 inches in height is given. It has been assumed, however, that the cupboards will be designed so that the height of the worktop can be varied.

IV. Calculation of the cost of equipment

(a) Cost recommendations in Equipment Notes

Figures of cost are given in the Equipment Notes for the Group II and III equipment in each room. They represent an average of good practice. Figures are not given for Group I equipment since this is covered by the cost limits published with the Building Notes. There may be, however, a choice whether particular items should be purchased as part of the construction contract or not. When items shown in the Notes as in Group I are in fact treated as in Group II, some economy in the Building Note cost limit will be possible at the expense of some increase in the equipment cost, and this should be shown when cost limits are prepared as described in the Building Notes.

The Notes do not attempt to lay down lists of equipment or cost figures which may in no circumstances be exceeded. The equipment provided will often vary from that suggested in the lists and more often than not the cost will be less than suggested in the final summaries, if only because many new departments will be partially equipped with items from the departments they replace. Minor variations from the basic lists should be possible within the cost figures given and reductions should be possible whenever existing equipment is being transferred to the new department.

Equipment to be provided for the "additional accommodation" shown in the Building Notes is shown separately from the "basic accommodation." Some items which will only occasionally be necessary in the "basic accommodation" are also shown separately in the additional lists.

(b) Presentation of cost in relation to building schemes

The estimated cost of Group II and III equipment for both basic and additional accommodation should be prepared, in association with the cost limits for the building, at two stages:

(i) a provisional figure should be prepared as soon as the schedules of accommodation have been settled;

(ii) a final figure will be required at sketch plan stage. This should not subsequently be exceeded.

The departmental cost figures given in the Equipment Notes should enable hospital boards to assess the cost of equipment (taking into account transfers from existing buildings) even though all items may not have been selected and priced.

V. The equipping of a hospital building

The equipping of a unit cannot be separated from the planning of the building as a whole and the aim must be to secure that the equipment will be available at the appropriate time, thus avoiding delay in the commissioning of the hospital.

The main stages in equipping a project are as follows:

(*a*) Studying and consulting.
(*b*) Specifying and scheduling.
(c) Consolidating, final selection, costing and approving.
(*d*) Ordering, receiving and checking.
(*e*) Storing and distributing.

The requirements of each individual project will need to be considered item by item, but throughout these stages, full use should be made of the Equipment Notes which are being published for specific departments.

(a) Studying and Consulting

While the schedules of accommodation for a scheme are being prepared, a survey of the requirements for Group I and II equipment should be made and the main items of equipment which the organisational procedures require and which will have a significant effect on such questions as floor area, ceiling height, ease of access, structural loading or special mechanical services should be listed. The schedules of accommodation should be studied room by room and the equipment (both technical and domestic) listed. It should be clearly understood what purpose each item of equipment is to serve and any special requirements should be noted.

The list should identify those items to be supplied under the construction contract (Group I) and those to be supplied by other means.

At this stage, a preliminary estimate of cost should be made—see para. IV(*b*) above.

(b) Specifying and Scheduling

During the preparation of the sketch plans the equipment schedules should be developed and a final estimate of cost made—see para. IV(*b*) above. The

preliminary list prepared earlier will form the basis of the schedules. The list will be progressively added to and refined during the stages of the sketch plan and working drawings from the original stage of listing main items in Groups I and II to the eventual addition of Group III equipment. It is essential in preparing the sketch plans to know what equipment will be needed and to visualise the space which will be required for its use. At this stage the list should be reasonably comprehensive and the positioning of major items of equipment should be indicated on the sketch plans so that it is known that it will be in the right place in relation to the work and will not interfere with the work flow within the room. This will also act as a check on the proposed procedures in relation to the working areas affected. Certainly the whole of the fixed equipment should be decided before the working drawings are started. It will also be necessary to consider, if this has not already been done, when the equipment will be wanted on the job.

The schedules, which should be prepared as soon as possible and added to as, in the earlier stages of planning, the needs are more closely defined, should preferably show the following:

(i) Department.

(ii) (*a*) List of articles room by room (each room being identified by a number on the schedules of accommodation and on the plans).

(*b*) List of articles by department.

(iii) (*a*) Unit cost.

(*b*) Quantity cost.

(*c*) Consolidated cost by department.

Each numbered room or space should be studied at each appropriate stage and all the equipment (both technical and domestic) to be placed in it should be listed, excluding items used throughout the department—see below. In addition to the description of each article, the unit and quantity will be needed. Although the Group I items will not be subject to the same purchasing procedure as will the Group II and III items, it is valuable to show them in the room schedules (under their group heading) in order to present a complete picture of the contents of the room, to avoid gaps or duplication, and to act as a check that the appropriate items have been included in the main contract for the works. It may in addition be valuable to include certain general information on each room sheet, e.g. regarding lighting and electrical outlets, and the proposed colour scheme. The eventual list should also include a note giving the floor where each space is to be situated.

Certain articles cannot be listed by rooms and will require to be listed on a departmental basis. These include any special equipment or apparatus required throughout the department, together with a wide range of smaller articles of general use. The schedules prepared on a departmental basis will contain basic information of the same type as those prepared by rooms.

In preparing the lists, particularly for technical equipment, e.g. instruments, electro-medical apparatus, etc., the requirements should be examined in consultation with the head of the department or the main user likely to be concerned.

(*c*) *Consolidating, Final Selection, Costing and Approving*

When completed, the room schedules and the departmental schedules can be brought together for consolidation on a departmental basis prior to final selection, pricing and ordering. The punched card system or similar methods should be adopted to produce comprehensive schedules of equipment for each department and then for all departments together.

These schedules should be critically examined, since it may be found that departments will often ask for similar, but not necessarily identical, items although both items are fulfilling similar functions. The schedules should be sifted with the aim of keeping the number of different types and sizes to a minimum and to facilitate bulk buying. This sifting will form part of the selection process. The views of the head of the department and the main users will have been noted at the earlier stages, and discussion with appropriate specialists will be necessary on questions of design, colour and general style. Lists of furniture and equipment available on central contracts should be examined as well as manufacturers' catalogues where appropriate. Discussions can be assisted by the use of sketches and colour cards showing the colour scheme, illustrations of the main type of furniture and cuttings from the coverings and materials to be incorporated. Factors which will need to be taken into account include capital cost, cost and ease of maintenance, susceptibility to damage (e.g. surfaces), mechanical and electrical safety, and the problems of noise and cross infection.

As decisions are taken, the names of manufacturers from whom tenders can be invited and relevant catalogue numbers should be recorded. It will be necessary to ensure that the selection of items is made within the sums which had been estimated for equipping the building (see (*b*) above).

The consolidated schedules, besides showing the amount of each item and the anticipated cost, should show provisional delivery date, order number, name of supplier, actual cost, actual delivery date, etc.

(*d*) *Ordering, Receiving and Checking*

To ensure that the full range of furniture and equipment is available for use as soon as the building is ready for occupation, orders should be placed in a comprehensive manner and in good time. The time that will be required from the placing of the order for each item to the delivery date should be ascertained and the date for placing orders fixed accordingly. Long periods of storage must be avoided as this may lead to deterioration of some articles, will take up valuable space and may increase

the number of requests for alterations to orders because of the introduction of new materials or improved designs in the period between supply and use. The officer responsible for equipment should confirm from time to time that delivery dates will be met.

(e) Storing and Distributing

Although long periods of storing should be avoided, it will often be found necessary to arrange for space to be available, convenient to, or within the building, for the receipt, temporary storage and sorting of equipment prior to its final positioning.

VI. Control of noise*

The equipping of a new department presents an excellent opportunity for the control of noise to be tackled in a comprehensive manner and this should receive high priority among the factors taken into account when selecting equipment for use in or near patient areas.

VII. British Standards

Hospital authorities receive regular information about the work of the British Standards Institution in the field of specialised hospital requirements, and should use published British Standards to the maximum practicable extent in purchasing equipment and supplies. An indication will be given throughout the Equipment Notes of the numbers of current British Standards for specialised items of hospital and medical equipment applicable to the particular items listed. A comprehensive list of British Standards applicable to hospital supplies is provided in the Hospital Purchasing Officers' Guide to British Standards; abstracts describing briefly the scope and contents of each Standard are published in the B.S.I. Yearbook. In judging the extent of the relevance of a particular Standard to a particular purchase, however, it is recommended that the Standard itself should be perused.

* See (i) Report on Control of Noise in Hospitals, prepared by the Standing Nursing Advisory Committee for the Central Health Services Council, July 1961; (ii) two reports on Noise Control in Hospitals, published by King Edward's Hospital Fund for London, November 1958 and December 1960 price 5p each.

DHSS Welsh Office

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